

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2004/000847

## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

The subject-matter of Claims 1-15 relates to keypads which are shift-arranged without inter-cross between the adjacent number keys in an input device. The subject-matter of Claims 16-19 relates to a method of deciding if a user is authorized or unauthorized by comparing his finger action with the stored finger action in an input device. The subject-matter of Claims 20-32 relates to a method of displaying image sequences comprised of a key image and a masking image in an input device.

The above 3 groups of claims are not so linked as to form a single general inventive concept under PCT Rule 13.1-13.2 because there is no common or corresponding special technical features among those claims.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any addition fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR2004/000847

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7 G09C 1/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 : G09C\*, G06F3\*, H04Q\*

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
KR, JP as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
FPD, PAJ, USPAT.

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|-----------|--|-----------------------|
| X         | JP 2002-032176 A (Dainippon Printing Co LTD) 31 Jan 2002<br>See Page 7-2 [0003] , Page 7-3 [0013] ~ Page 7-4 [0032] , and Fig 1 - 3. | 1, 4, 8, 13 - 15      |
| Y         | See Page 7-4 [0033] ~ [0037] , and Fig 5.  | 2, 3 5 - 7, 9 - 12    |
| A         |  | 16 - 19               |
| Y         | JP 2001-228970 A (Toppan Printing Co LTD) 24 Aug 2001<br>See abstract, Page 7 - 4 [0030] , and Fig 1 - 3.                            | 2, 3                  |
| A         |  | 16 - 19               |
| Y         | JP 2002-358153 A (Konami Co LTD) 13 Dec 2002<br>See Page 6-4 [0002] ~ Page 6-5 [0036] , and Fig 3 - 5.                               | 5 - 7, 9 - 12         |
| A         |  | 16 - 19               |

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance  
"E" earlier application or patent but published on or after the international filing date  
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)  
"O" document referring to an oral disclosure, use, exhibition or other means  
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art  
"&" document member of the same patent family

Date of the actual completion of the international search  
18 AUGUST 2004 (18.08.2004)

Date of mailing of the international search report  
19 AUGUST 2004 (19.08.2004)

Name and mailing address of the ISA/KR



Korean Intellectual Property Office  
920 Dunsan-dong, Seo-gu, Daejeon 302-701,  
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

JEONG, Jae Heon

Telephone No. 82-42-481-5672



# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR2004/000847

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|-----------|---|-----------------------|
| D, X      | US 4,857,914 A (Keith R. Thrower) 15 Aug 1989<br>See column 1 line 60 ~ column 3 line 40 and Fig 1 - 2.                     | 1, 4, 8, 13 - 15      |
| Y         |   | 2, 3, 5 - 7, 9 - 12   |
| A         | JP 2000-214943 A (Nec Corp) 4 Aug 2000<br>See Page 7-4 【0020】 ~ Page 7-5 【0027】 and Fig 4 - 6.                              | 1 - 19                |
| A         | JP 61-229160 A (Toshiba Corp) 13 Oct 1986<br>See Page 375 right column line 5 ~ Page 376 left column line 17 and Fig 1 - 4. | 1 - 19                |
| A         | WO 02/39656 A (Threewin.com Co LTD) 16 May 2002<br>See abstract and Fig 4a ~ 4d.  | 1 - 19                |

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2004/000847

| Patent document<br>cited in search report | Publication<br>date | Patent family<br>member(s)   | Publication<br>date                                  |
|---|---------------------|--|--|
| JP 2002-032176 A                          | 31/01/2002          | None   |  |
| JP 2001-228970 A                          | 24/08/2001          | None   |  |
| JP 2000-214943 A                          | 04/08/2000          | None   |  |
| US 4,857,914 A                            | 15/08/1989          | None   |  |
| JP 2002-358153 A                          | 12/12/2002          | None   |  |
| JP 61-229160 A                            | 13/10/1986          | None   |  |
| WO 02/39656 A1                            | 16/05/2002          | KR 2002-0074475 A<br>AU 1178201 A<br>JP 2004-514161 T<br>US 2004-010690 A1 | 30/09/2002<br>21/05/2002<br>13/05/2004<br>15/01/2004 |